



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/051,415	01/18/2002	Santosh C. Lolayekar	MARA-01001US0 SBS	7003

48789 7590 07/14/2006

LAW OFFICES OF BARRY N. YOUNG
260 SHERIDAN AVENUE
SUITE 410
PALO ALTO, CA 94306-2047

EXAMINER

WALSH, JOHN B

ART UNIT	PAPER NUMBER
----------	--------------

2151

DATE MAILED: 07/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/051,415

Applicant(s)

LOLAYEKAR ET AL.

Examiner

John B. Walsh

Art Unit

2151

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 13 April 2006.
- 2a) This action is **FINAL**.
- 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) _____ is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-36 and 49 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____

Response to Amendment

1. This office action is response to the amendment filed on April 13th, 2006. Claims 1-36 and 49 are presented for further examination.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-18, 20- 23, 34-36 and 49 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No 6,400,730 to Latif et al.

As concerns claims 1 and 11, a method for use in a system for storing and accessing data, the method comprising: (a) receiving a packet formatted in accordance with a first protocol from a first device that operates in accordance with the first protocol (column 2, lines 55-60); (b) translating the packet to one formatted in accordance with a second protocol (column 2, lines 64-65); (c) forwarding the packet to a second device that operates in accordance with the second protocol (column 2, line 66- column 3, line 5); and wherein steps (a)-(c) occur without buffering the packet (column 11, lines 55-63).

As concerns claims 2, 13, 21, and 36 the method of claim 1, wherein steps (a)-(c) occur at wire speed (Latif et al disclose switches for performing the functions, switches can operate at wire speed).

As concerns claim 3, the method of claim 1, wherein translating includes mapping at least some of the fields of the packet formatted in accordance with the first protocol into the packet formatted in accordance with the second protocol (figure 6a).

As concerns claim 4, the method of claim 3, wherein translating further includes adding information into any fields of the packet formatted in accordance with the second protocol that are not mapped from the packet formatted in accordance with the first protocol (figure 6a).

As concerns claims 5, 7, 15, and 17, wherein the first protocol is iSCSI and the second protocol is Fibre Channel and wherein the first protocol is Fibre Channel and the second protocol is iSCSI (column 6, lines 9-11, 52; abstract; lines 1-8).

As concerns claims 6, 8, 16, and 18, wherein the first protocol is iSCSI embedded in TCP and wherein the second protocol is iSCSI embedded in TCP (column 7, lines 4-6).

As concerns claims 9, 10, 22 and 23, the method of claim 1, wherein the first device is an initiator and the second device is a target and wherein the first device is a target and the second device is an initiator (column 5, line 57).

As concerns claim 12, a method for use in a system for storing and accessing data, the method comprising: receiving a packet formatted in accordance with a first recognized protocol (column 2, lines 55-60); and mapping the fields of the packet to a new packet formatted in accordance with a second protocol without buffering the packet (figure 6a; column 11, lines 55-63).

As best understood concerning claim 14, the method of claim 12, wherein mapping includes mapping the fields of the packet to a new packet formatted in accordance with a second protocol without buffering and without using CPU resources (figure 6a; column 11, lines 55-63).

As concerns claim 20, a method for use in a system for storing and accessing data, the method comprising: receiving a packet from a first device, the packet formatted in accordance with one of the iSCSI or Fibre Channel protocols (column 2, lines 55-60); if the packet is formatted in accordance with the iSCSI protocol, translating the packet into a Fibre Channel packet by mapping at least some of the fields from the packet formatted in accordance with the iSCSI protocol into the Fibre Channel packet (column 2, lines 60-63, column 6, lines 9-11, 52; abstract, lines 1-8); if the packet is formatted in accordance with the Fibre Channel protocol, translating the packet into an iSCSI packet by mapping at least some of the fields from the packet formatted in accordance with the Fibre Channel protocol into the iSCSI packet (figure 6a; column 11, lines 55-63); forwarding the packet as translated to a second device (column 2, line 66-

Art Unit: 2151

column 3, line 5); and wherein all of the above steps are performed without buffering(column 11, lines 55-63).

As concerns claim 34, a method for use in a system for storing and accessing data, the method comprising: receiving at an ingress linecard a packet formatted in accordance with a first protocol, the packet destined for a virtual target with a virtual target address (column 19, line 26); the ingress linecard retrieving information about the virtual target from a virtual target descriptor, the information including a flowID, and placing a virtual target descriptor identifier and the flowID, in a local header of the packet(IP address); the ingress linecard forwarding the packet to a fabric, which forwards the packet to an egress linecard in accordance with the flowID(port ID, figure 6c);the egress linecard using the virtual target descriptor identifier to identify information about a physical target associated with the virtual target, including whether the physical target requires a packet formatted in accordance with a second protocol, and using the information about the physical target to convert a virtual target block address to a physical target block address and to translate, if necessary, the format of the packet from the first protocol to the second protocol(column 2, lines 64-65); and the egress linecard sending the packet to the physical target using the physical target block address(column 2, lines 66- column 3, line 5).

As concerns claim 35, the method of claim 34, wherein all of the steps are performed without buffering (column 11, lines 55-63).

As best understood concerning claim 49, a set of software instructions (column 2, lines 53-54) stored on at least one medium in a switch for use in a system for storing and accessing data, which instructions are executable by a processor, the instructions including: instructions for receiving a packet from a first device (column 2, lines 55-60) the packet formatted in accordance with one of the iSCSI or Fibre Channel protocols (column 6, lines 9-11, 52; abstract, lines 1-8); if the packet is formatted in accordance with the iSCSI protocol, instructions for translating the packet into a Fibre Channel packet by mapping at least some of the fields from the packet formatted in accordance with the iSCSI protocol into the Fibre Channel packet; if the packet is formatted in accordance with the Fibre Channel protocol, instructions for translating the packet into an iSCSI packet by mapping at least some of the fields from the packet formatted in accordance with the Fibre Channel protocol into the iSCSI packet (column 6, lines 9-11, 52; abstract, lines 1-8); instructions for forwarding the packet as translated to a second device (column 2, line 66 – column 3, line 5); and wherein all of the above instructions do not require the packet to be buffered (column 11, lines 55-63).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 2151

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 19 and 24-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No 6,400,730 to Latif et al.

As concerns claims 19 and 24 – 33, the type of packet (i.e. command, response, etc) is unimportant such that it does not effect the patentable operation of the invention, since it is the protocol format that is of concern to the invention; therefore the type of packet is seen as an obvious design choice.

Response to Arguments

6. Applicant's arguments filed April 13th, 2006 have been fully considered but they are not persuasive.

7. As per arguments filed on April 13th, 2006, the applicants' argue in substance that:

- a. Applicant representative argues that Latif does not disclose either a method or an apparatus for transferring data "without buffering"

In response to applicant argument a), Latif does disclose transferring data without buffering [transferring data directly] (see column 11, line 5 – column 12, line 67, examiner interprets if the destination device is compatible device, the packet is processed directly by the destination device as transferring data "without buffering").

Art Unit: 2151

b. Applicant representative argues that Latif does not disclose that the processing occurs at wire speed.

In response to applicant argument b), Latif does disclose that the processing occurs at wire speed (see column 11, line 5 – column 12, line 67, examiner considers Small Computer System Interface (SCSI) is a parallel I/O bus and protocol that permits the connection of a variety of peripherals to a host computer via SCSI ports. Examiner interprets SCSI devices are treated as Fibre Channel devices by a switch and data switching at high speed network, based on Ethernet switching and/or ATM, via SCSI port using switches operates at wire speed).

c. Applicant representative argues that Latif does not disclose the use of a virtual target descriptor identifier and flowID.

In response to applicant argument c), Latif does disclose the use of a virtual target descriptor identifier (IP address) and flowID (port ID, figure 6c) (see column 11, line 5- column 12, line 67, examiner interprets each device is assigned a unique IP address and an attached Fibre channel N_Port would have a unique IP address while the device of a Fibre Channel arbitrate loop attached thereto would share an IP address as the use of IP address [virtual descriptor identifier] and portID with a unique IP address [flowID]).

Art Unit: 2151

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Higgins '841 discloses writing message data without buffering.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John B. Walsh whose telephone number is 571-272-7063. The examiner can normally be reached on 5:30am-4:00pm M-W.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zarni Maung can be reached on 571-272-3939. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


ZARNI MAUNG
SUPERVISORY PATENT EXAMINER